

IN THE CLAIMS:

1. A stripping process for removing flue gas carried by regenerated catalyst, which process comprises:

(a) providing a stripper for removing flue gas carried by regenerated catalyst, the stripper comprising:

(1) a vertical cylinder;

(2) a degassing pipe located at the longitudinal axis of the vertical cylinder;

(3) a horizontal pipe connected with the lower end of the degassing pipe;

(4) a plurality of sets of inner annular baffles fixed on the degassing pipe, wherein said inner annular baffles includes an upper conic plate and an lower skirt, the degassing pipe having an opening part below each set of the inner annular baffles;

(5) a plurality of sets of outer annular baffles fixed on the inner wall of the cylinder, wherein said outer annular baffles include an upper conic plate and a lower skirt, the outer annular baffles having some small holes, the inner annular baffles and the outer annular baffles being arranged along the vertical direction in an alternating spaced arrangement;

(6) annular steam conduits with some small holes located in the spaces below each set of the outer annular baffles;

(7) steam introducing conduits connected with the annular steam conduits;

(8) a gas outlet at the top of the cylinder;

(9) a catalyst inlet at the upper part of the cylinder; and

(10) an outlet for stripped catalyst at the bottom of the cylinder wherein said outlet is connected with the catalyst conveying through a transition section,

(b) passing the regenerated catalyst into the stripper from its upper part,

the catalyst flowing downwards via gravity, each set of the inner annular baffles directing the catalyst to flow outwards towards the same set of the outer annular baffles and then the set of the outer annular baffles directing the catalyst to flow towards the next set of the inner annular baffles, thereby several sets of the inner annular baffles and the outer annular baffles at different heights cause a zigzag flow of the catalyst in the cylinder;

(1) introducing a steam to the annular steam conduit through the steam introducing conduit,

the steam flowing out from the small holes on the annular steam conduit, passing through the small holes in the outer annular baffles and coming into a countercurrent and cross current contact with the regenerated catalyst,

the steam rapidly replacing the flue gas carried by the regenerated catalyst, the removed gas and the excessive steam being collected under each set of inner annular baffles and entering the degassing pipe through the opening part of the degassing pipe;

(2) discharging the stripped regenerated catalyst from the bottom of the stripper; and

(3) venting the removed flue gas and excessive steam in the degassing pipe from the top of the stripper under the action of steam or air from the horizontal pipe.

2. The process according to claim 1, wherein said regenerated catalyst comes from catalytic conversion process.

3. The process according to claim 2, wherein said catalytic conversion processes are catalytic pyrolysis process, or deep catalytic cracking.

3. The process according to claim 1, wherein the

velocity of the regenerated catalyst entering the stripper tangentially is 10-18 m/s.

4. The process according to claim 1, wherein the residence time of the steam in each contact section consisted of inner annular baffles and outer annular baffles is less than 3 s.

5. The process according to claim 1, wherein the velocity of the regenerated catalyst in the stripper is 0.05-0.3 m/s.